

EXHIBIT E

REARDEN LLC, ET AL. vs THE WALT DISNEY COMPANY, ET AL.
Confidential **Hao Li on 05/28/2020**

1 UNITED STATES DISTRICT COURT

2 NORTHERN DISTRICT OF CALIFORNIA

3 SAN FRANCISCO DIVISION

4 REARDEN LLC, REARDEN MOVA)
5 LLC, California limited)
6 liability companies,)

7 Plaintiffs,)

8 v.)

Case No. 4:17-CV-04006-JST
4:17-CV-04191-JST

9 THE WALT DISNEY COMPANY,)
10 a Delaware corporation,)
11 WALT DISNEY MOTION)
12 PICTURES GROUP, INC., a)
13 California corporation,)
14 BUENA VISTA HOME)
15 ENTERTAINMENT, INC. A)
16 California corporation,)
17 MARVEL STUDIOS, LLC, a)
18 Delaware limited)
19 liability company,)
20 MANDEVILLE FILMS, INC., a)
21 California corporation,)
22 Defendants.)

23

24 CONFIDENTIAL

25 Deposition of HAO LI

via videoconference

Thursday, May 28, 2020

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29 Michael P. Hensley, RDR, CSR No. 14114

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4	REARDEN LLC, REARDEN MOVA)	
	LLC, California limited)	
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6	Plaintiffs,)	
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8	THE WALT DISNEY COMPANY,)	
	a Delaware corporation,)	
9	WALT DISNEY MOTION)	
	PICTURES GROUP, INC., a)	
10	California corporation,)	
	BUENA VISTA HOME)	
11	ENTERTAINMENT, INC. A)	
	California corporation,)	
12	MARVEL STUDIOS, LLC, a)	
	Delaware limited)	
13	liability company,)	
	MANDEVILLE FILMS, INC., a)	
14	California corporation,)	
)	
15	Defendants.)	
)	

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 18
 19 Deposition of HAO LI, commencing at the hour of
 20 9:13 A.M. and concluding at the hour of 3:30 PM on
 21 Thursday, May 28, 2020, via videoconference, before
 22 Michael Hensley, Registered Diplomate Reporter,
 23 Certified Shorthand Reporter No. 14114, in and for the
 24 State of California.

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1 the individual names for each component, but, you know,
2 there's a wide range of capture. There's not one system
3 that they use.

4 And for every movie, they -- the director is --
5 the art direction may choose a specific technique based
6 on the use case.

7 Q. Okay. If we focus on -- on dense marker facial
8 motion capture systems, would you be able to identify,
9 give me a list of the specific systems that you have
10 hands-on experience with?

11 A. Well, there is definitely the ones that -- I
12 mean, my -- almost my entire PhD was dealing with these
13 kind of systems. So we have systems that were captured
14 using a wide range of different 3D scanning devices.
15 Some come from commercial. Some come from our labs, our
16 own labs. Some come from, you know, some collaboration
17 with other labs.

18 At Weta Digital, we had -- they had their own
19 capture systems where the uses at ILM, they had their
20 own capture systems. And, you know, in some ways
21 they're all -- more -- I mean, if it's dense capture,
22 it's always more or less similar. You have multiple
23 cameras. It gets a 3D scan, and then you, you know, you
24 track the mesh. So it's always the -- it's always a
25 very similar pipeline.

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1 There's -- there's small details that are
2 different between different systems. Sometimes some
3 have better hardware. Sometimes some people have
4 different lighting conditions. And sometimes it's a
5 combination. It's never, like -- not never, but it's --
6 very often it's a combination of let's use this solution
7 using this specific software, and this is our internal
8 software.

9 So even though, let's say, for example, with
10 ILM, even though they would have capabilities for many
11 parts of it, if not all of it, of the whole pipeline
12 from capture, tracking, to retargeting, they could say,
13 you know, let's test with another retargeting software,
14 maybe that's better. Let's use another tracking --
15 let's use this -- this is something capture ourselves.
16 Let's have another company capture, because sometimes
17 the capture comes -- it has to be on set or it has to be
18 in a different location. So they would combine these
19 kind of pipelines.

20 So it's a little difficult for me to specify --
21 to give a list of, which there is. But, essentially,
22 I've worked with a wide range of them. And they all
23 comes in different flavors.

24 Q. Okay. You know, I -- I appreciate that. And
25 I'm trying to get my arms around the extent of your

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1 A. No.

2 Q. -- to process that data yourself.

3 A. No, I wasn't.

4 Q. Correct?

5 A. Correct.

6 Q. And so you -- you've mentioned a couple times
7 the Weta Digital digital proprietary systems. Did they
8 have a name for those?

9 A. No. I mean, maybe they had. I can't remember
10 or I don't know what the name is. But maybe there
11 wasn't a name. It was a -- it wasn't a -- I mean, it's
12 just -- I mean, you know, for -- it's nothing really
13 particular; right? It's basically just multiuse stereo.
14 And you do mesh tracking; right? And it's just -- I
15 mean, it's -- it's a very challenging process. But it's
16 a -- it's a standard approach; right?

17 So many -- many companies who have facial
18 performance capture systems -- I mean, there's, like --
19 probably, like, DI4D. There's a lot of vendors that
20 have these kind of capabilities, and it's always more or
21 less the same. It's capturing faces and then being able
22 to generate a tracked mesh. And that's sort of like
23 the -- if -- a nice approach to get high fidelity, you
24 know, facial tracking for the effects companies.

25 Q. Yes. And I'm just trying to get arms around

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1 CERTIFICATE OF SHORTHAND REPORTER

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3 I, Michael P. Hensley, Registered Diplomat
4 Reporter for the State of California, CSR No. 14114, the
5 officer before whom the foregoing deposition was taken,
6 do hereby certify that the foregoing transcript is a
7 true and correct record of the testimony given; that
8 said testimony was taken by me stenographically and
9 thereafter reduced to typewriting under my direction;
10 that reading and signing was requested; and that I am
11 neither counsel for, related to, nor employed by any of
12 the parties to this case and have no interest, financial
13 or otherwise, in its outcome.

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Michael P. Hensley, CSR, RDR

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